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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,864	06/15/2000	Tooru Kamibayashi	04329.2319	9097

22852 7590 07/29/2005

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EXAMINER	
CALLAHAN, PAUL E	
ART UNIT	**PAPER NUMBER**
2137	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/593,864	KAMIBAYASHI ET AL.	
	Examiner	Art Unit	
	Paul Callahan	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1-14 were pending at the time of the previous Office Action in the case. Claims 10-14 have been cancelled by the latest amendment. Therefore claims 1-9 are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being anticipated by Ueda et al., and Hirokawa et al., US 4,855,578.

As for Claim 1, Ueda et al teach a mutual authentication method for use between a recording apparatus which records copied contents on a removable recording medium having an arithmetic processing function, and the removable recording medium, said method comprising the steps of: storing in the removable recording medium at least first information which depends on the removable recording

medium, and second information which is to be shared by the recording apparatus in executing mutual authentication with the recording apparatus and depends on the recording medium, and generating by the recording apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the recording apparatus and the recording medium using the generated authentication information and the second information (col.2 line 61 thru col.3 line 5., col.3 line 45 thru col.5 line 64), wherein executing the mutual authentication includes the steps of generating a random number in the recording apparatus and transferring the random number to the removable recording medium (col.37 line 18-23), generating a first function in the recording apparatus using the generated authentication information and the generated random number (col.37 lines 45-49), generating a second function in the removable recording medium using the generated second information and the transferred random number, and transferring the second function to the recording apparatus (col.37 lines 34-37), and comparing the generated first function with the generated second function in the recording apparatus (col.37 lines 49-51). Hirokawa teaches the features that Ueda does not, namely a removable recording medium that is a memory card (col. 13 lines 49-54) , and a first and a second semiconductor memory used in storage (fig. 1 items 4, 6, and 7; col. 5 lines 53-58), and an arithmetic processor on the card (fig. 1 items 4, 6, and 7) used in generating a second function. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Hirokawa into the

system of Ueda. It would have been desirable to do so as the motive to make the combination is found in, for example, (col. 13 lines 49-54) of Hirokawa where the use of such features on an optical storage medium is discussed.

As for Claim 2, Ueda et al teach the method according to Claim 1, further comprising the step of: generating the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4, col.4 lines 43-51).

As for Claim 3, Ueda et al teach a mutual authentication method for use between a reproducing apparatus which reproduces copied contents recorded on a removable recording medium having an arithmetic processing function, and the removable recording medium, said method comprising the steps of:
storing in the removable recording medium at least first information which depends on the removable recording medium, and second information which is to be shared by the reproducing apparatus in executing mutual authentication with the reproducing apparatus and depends on the removable recording medium', and
generating by the reproducing apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the reproducing apparatus and the removable recording medium using the generated authentication information and the second information

(col.2 line 61 thru col.3 line 5., col.3 line 45 thru col.5 line 64), wherein executing the mutual authentication includes the steps of generating a random number in the reproducing apparatus and transferring the random number to the removable recording medium (col.37 line 18-23), generating a first function in the reproducing apparatus using the generated authentication information and the generated random number (col.37 lines 45-49), generating a second function in the removable recording medium using the generated second information and the transferred random number, and transferring the second function to the reproducing apparatus (col.37 lines 34-37), and comparing the generated first function with the generated second function in the reproducing apparatus (col.37 lines 49-51). Hirokawa teaches the features that Ueda does not, namely a removable recording medium that is a memory card (col. 13 lines 49-54) , and a first and a second semiconductor memory used in storage (fig. 1 items 4, 6, and 7; col. 5 lines 53-58), and an arithmetic processor on the card (fig. 1 items 4, 6, and 7) used in generating a second function. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the features of Hirokawa into the system of Ueda. It would have been desirable to do so as the motive to make the combination is found in, for example, (col. 13 lines 49-54) of Hirokawa where the use of such features on an optical storage medium is discussed.

As for Claim 4, Ueda et al teach the method according to claim 3, further

comprising the step of: generating the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4., co1.4 lines 43-51).

As for Claim 5, Ueda et al teach a recording apparatus for recording copied contents on a removable recording medium while limiting the number of copied contents to be recorded on the removable recording medium, said apparatus comprising: generation means for generating authentication information, which is used in mutual authentication with the removable recording medium and is to be shared by the removable recording medium, on the basis of first information that is obtained from the removable recording medium and depends on the recording medium', and mutual authentication means for executing mutual authentication with the removable recording medium using the authentication information generated by said generation means (col.2 line 61 thru col.3 line 5., col.3 line 45 thru col.5 line 64, col.18 lines 10-32., col.21 lines 25-29), wherein the mutual authentication means includes means for generating a random number and transferring the random number to the removable recording medium (col.37 line 18-23), means for generating a first function using the generated authentication information and the generated random number (col.37 lines 45-49), means for receiving from the removable recording medium a second function generated using second information and the transferred random number (col.37 lines34-37), and means for comparing the generated first function with the generated second function (col.37 lines 49-51). Hirokawa teaches the features that

Ueda does not, namely a removable recording medium that is a memory card (col. 13 lines 49-54) , and a first and a second semiconductor memory used in storage (fig. 1 items 4, 6, and 7; col. 5 lines 53-58), and an arithmetic processor on the card (fig. 1 items 4, 6, and 7) used in generating a second function. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Hirokawa into the system of Ueda. It would have been desirable to do so as the motive to make the combination is found in, for example, (col. 13 lines 49-54) of Hirokawa where the use of such features on an optical storage medium is discussed.

As for Claim 6, Ueda et al teach an apparatus according to claim 5, wherein said generation means generates the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium (col.4 lines 3-4., col.4 lines 43-51).

As for Claim 7, Ueda et al teach a reproducing apparatus for reproducing copied contents recorded on a removable recording medium while limiting the number of copied contents to be recorded on the removable recording medium, said apparatus comprising: generation means for generating authentication information, which is used in mutual authentication with the removable recording medium and is to be shared by the removable recording medium, on the basis of first information which is obtained from the removable recording medium and depends on the removable recording medium, and mutual authentication means for executing mutual authentication with the

removable recording medium using the authentication information generated by said generation means (col.2 line 61 thru col.3 line 5, col.3 line 45 thru col.5 line 64., col.18 lines 10-32*, col.21 lines 25-29), wherein the mutual authentication means includes means for generating a random number and transferring the random number to the removable recording medium (col.37 line 18-23), means for generating a first function using the generated authentication information and the generated random number (col.37 lines 45-49), means for receiving from the removable recording medium a second function generated using second information and the transferred random number (col.37 lines 34-37), and means for comparing the generated first function with the generated second function (col.37 lines 49-51). Hirokawa teaches the features that Ueda does not, namely a removable recording medium that is a memory card (col. 13 lines 49-54) , and a first and a second semiconductor memory used in storage (fig. 1 items 4, 6, and 7; col. 5 lines 53-58), and an arithmetic processor on the card (fig. 1 items 4, 6, and 7) used in generating a second function. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Hirokawa into the system of Ueda. It would have been desirable to do so as the motive to make the combination is found in, for example, (col. 13 lines 49-54) of Hirokawa where the use of such features on an optical storage medium is discussed.

As for Claim 8, Ueda et al teach an apparatus according to claim 7, wherein said generation means generates the authentication information by encrypting the first information using an encryption key obtained from the removable recording medium

(col.4 lines 3-4., col.4 lines 43-51).

As for Claim 9, Ueda et al teach a removable recording medium having an arithmetic processing function, comprising: storage means for pre-storing first information which is unique to said removable recording medium, and second information which is to be shared by a recording, apparatus for recording copied contents on said recording medium and a reproducing, apparatus for reproducing the copied contents in executing mutual authentication among the removable recording medium, the recording apparatus, and the reproducing apparatus, and depends on said removable recording medium, and mutual authentication means for executing mutual authentication between the removable recording medium and the recording apparatus, and between the removable recording medium and the reproducing apparatus using authentication information generated based on the first information by the recording apparatus and the reproducing apparatus, and the second information (col.4 lines 3-4*, col.4 lines 43-51), wherein the mutual authentication means includes means for generating a random number and transferring the random number to one of the recording apparatus and the reproducing apparatus (col.37 lines 59-63), means for generating a first function using the generated authentication information and the generated random number (col.38 lines 13-17), means for receiving from one of the recording apparatus and the reproducing apparatus a second function generated using the authentication information and the transferred random number (col.38 lines 4-13), and means for comparing the generated first function with the generated second

function (col.38 lines 17-19). Hirokawa teaches the features that Ueda does not, namely a removable recording medium that is a memory card (col. 13 lines 49-54) , and a first and a second semiconductor memory used in storage (fig. 1 items 4, 6, and 7; col. 5 lines 53-58), and an arithmetic processor on the card (fig. 1 items 4, 6, and 7) used in generating a second function. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the features of Hirokawa into the system of Ueda. It would have been desirable to do so as the motive to make the combination is found in, for example, (col. 13 lines 49-54) of Hirokawa where the use of such features on an optical storage medium is discussed.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Caldwell, can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is: (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

7-20-2005

Paul Callahan